IN THE CLAIMS

Please amend the claims to be in the form as follows:

Claim 1 (currently amended): An optical head for scanning a first optical record carrier including a first information layer and a first transparent layer having a first thickness and for scanning a second optical record carrier including a second information layer and a second transparent layer having a second thickness different from the first thickness,

the head including a radiation source for generating a first radiation beam having a first wavelength and a second radiation beam having a second wavelength different from the first wavelength, the second radiation beam including a central sub-beam and an outer sub-beam,

an optical system for converging the first radiation beam through the first transparent layer to a focus on the first information layer and for converging the second radiation beam through the second transparent layer to a focus on the second information layer,

and a detection system for receiving radiation of the first and second radiation beam from the information layer and including a photo-sensitive area arranged in a detection plane,

the optical system including an optical element having a non-periodic phase structure, the phase structure including a plurality of concentric areas inducing a wavefront deviation in the first radiation beam that globally approximates a flat wavefront deviation and inducing a wavefront deviation in the central sub-beam that compensates the difference in spherical aberration due to the first and second transparent layer,

~~characterised~~ characterized in that the optical element is transparent for the first radiation beam, the central sub-beam and the outer sub-beam, and

that the wavefront deviation induced in the second radiation beam is such that, when the focus of the central sub-beam is located on the second information layer, the radiation of the central sub-beam and the outer sub-beam form a central intensity distribution and an outer intensity distribution, respectively, in the detection plane, the central intensity distribution and the outer intensity distribution being separated by a substantially dark area, and

the photo-sensitive area captures radiation of substantially only the central distribution.

Claim 2 (original): The optical head according to Claim 1, wherein the photo-sensitive area has an edge arranged in the dark area of the intensity distribution.

Claim 3 (original): The optical head according to Claim 1, wherein the phase structure induces a wavefront deviation in the second radiation beam that globally approximates spherical aberration and defocus, the defocus changing the axial distance between the focus of the central sub-beam and the focus of the outer sub-beam.

Claim 4 (currently amended): The optical head according to Claim 1, wherein the phase structure introduces ~~the~~ a defocus in the central sub-beam.

Claim 5 (currently amended): The optical head according to Claim 1, wherein the phase structure introduces ~~the~~ a defocus in the outer sub-beam.

Claim 6 (original): The optical head according to Claim 1, wherein the axial distance between the focus of the central sub-beam and the focus of the outer sub-beam is at least 12.5 μm.

Claim 7 (original): A device for scanning two types of optical record carrier, the device including an optical head according to Claim 1 and an information processing unit for error correction.

Claim 8 (new): An optical head for scanning multiple record carrier types,the head including a radiation source for generating a first radiation beam having a first wavelength and a second radiation beam having a second wavelength different from the first wavelength, the second radiation beam including a central sub-beam and an outer sub-beam,

an optical system for converging the first radiation beam upon a first media type to a focus and for converging the second radiation beam through upon a second media type, the optical system including an optical element having a non-periodic phase structure, the phase structure including a plurality of concentric areas inducing a wavefront deviation in the first radiation beam that globally approximates a flat wavefront deviation and inducing a wavefront deviation in the central sub-beam that compensates the difference in spherical aberration due to

the first and second media types, wherein the optical element is transparent for the first radiation beam, the central sub-beam and the outer sub-beam,

a detection system for receiving radiation of the first and second radiation beam from the firs and second media types including a photo-sensitive area arranged in a detection plane, and

wherein the wavefront deviation induced in the second radiation beam is such that, when the focus of the central sub-beam is located on the second information layer, the radiation of the central sub-beam and the outer sub-beam form a central intensity distribution and an outer intensity distribution, respectively, in the detection plane, the central intensity distribution and the outer intensity distribution being separated by a substantially dark area, and

the photo-sensitive area captures radiation of substantially only the central distribution.

Claim 9 (new): The optical head according to Claim 8, wherein the photo-sensitive area has an edge arranged in the dark area of the intensity distribution.

Claim 10 (new): The optical head according to Claim 8, wherein the phase structure induces a wavefront deviation in the second radiation beam that globally approximates spherical aberration and defocus, the defocus changing the axial distance between the focus of the central sub-beam and the focus of the outer sub-beam.

Claim 11 (new): The optical head according to Claim 8, wherein the phase structure introduces a defocus in the central sub-beam.

Claim 12 (new): The optical head according to Claim 8, wherein the phase structure introduces a defocus in the outer sub-beam.

Claim 13 (new): The optical head according to Claim 1, wherein the axial distance between the focus of the central sub-beam and the focus of the outer sub-beam is at least 12.5μm.

Claim 14 (new): A device for scanning first and second media types, wherein the device

includes an optical head according to Claim 8 and an information processing unit for error correction.

Claim 15 (new): The optical head according to Claim 8, wherein the phase structure compensates for spherical aberrations in the central sub-beam due to different media types.

Claim 16 (new): The optical head according to Claim 8, wherein the phase structure compensates for spherical aberrations in the central sub-beam due to the first and the second transparent layers..